

STATEMENT REGARDING ADEQUACY OF THE
FEDERAL AVIATION AGENCY'S
AIR TRAFFIC CONTROL SYSTEM IN THE
EVENT OF WAR OR MOBILIZATION

Under the Federal Aviation Act of 1958 the Administrator of the Federal Aviation Agency is responsible for establishing, operating, maintaining and improving the common civil-military system of air traffic control, aeronautical communications, and aids to air navigation. One of the Agency's principal responsibilities in support of a national defense effort derives from its role as the proprietor of this common civil-military system and the requirement for ensuring the continuous operation of the system during war or national emergency.

The Federal Aviation Act of 1958 directs the Administrator of the Federal Aviation Agency in the performance of his functions to give full consideration to the requirements of national defense. Pursuant to this policy directive in the Act, the Federal Aviation Agency attempts, to the extent permitted by its resources, to ensure maximum possible effectiveness and continuity of its operations in support of military air operations during an emergency and post-attack civil-military survival operations.

By virtue of a series of agreements between the Department of Defense and the Federal Aviation Agency (or its predecessor organizations), the Agency is committed to performing continuously throughout a pre-emergency, attack or post-attack period a variety of supporting services that include, among others, the following specifics:

Full operation of the Federal Airways system at maximum effectiveness;

Expeditious and effective execution of plans for security control of air traffic;

Full aircraft movement information service from FAA air traffic control facilities to Air Defense Command facilities;

Expeditious air traffic control service to air defense missions and fighter/interceptor aircraft;

Effective operation and maintenance of joint civil-military radar facilities;

Expeditious transmission of reports on vital intelligence sightings to appropriate military headquarters;

Positive and expeditious identification of in-bound aircraft over oceanic areas;

Operation of the Central Altitude Reservation Facility (CARF) to coordinate airspace reservations;

Operation of certain military radar approach control facilities;

Providing ground-to-air communications for military flights;

Transmitting aircraft movement messages for military flights originating at places other than military bases; and

Giving military users access to and use of FAA teletypewriter systems during emergencies.

Operational plans for these various military defense support activities are kept in a high degree of readiness. They are given continuing attention. If not currently in operation, they are periodically tested. The conditions of modern warfare dictate a volume and type of peacetime military flying, training, and surveillance activities that place many of FAA's wartime activities on a currently operational basis. When required by changing circumstances they are modified and revised in collaboration with the Department of Defense.

To ensure that the Federal Aviation Agency operating under wartime conditions can actually fulfill its civil-military responsibilities is a matter of the most serious concern to the Agency. This concern involves three principal elements:

- (1) the trained manpower required for effective wartime operations;
- (2) the capacity of the air traffic control system; and
- (3) the physical preparations necessary to making uninterrupted operations possible under attack or post-attack conditions.

The Federal Aviation Agency's wartime manpower problem is essentially that of having an adequately trained force-in-being that can be relied upon to respond effectively to vital wartime requirements. In view of the speed and destructiveness of warfare today, the Agency must be prepared to act effectively, at once, and without interruption if an attack should come. Many of the positions involved in the military support activities already described require as much as two years of training and experience that can be obtained only within the Federal Aviation Agency. Therefore, arrangements must be made to ensure

retention of this manpower in time of war or national emergency. Such action must also ensure the Administrator's capability of deploying personnel where and when necessary for the national defense and must provide appropriate physical and legal safeguards for the protection of employees who are required to accept military support duties that cannot be interrupted despite personal risk or special hazard.

In recognition of the essentiality of the air traffic control function in an emergency, the FAA is in the process of preparing legislation that will insure availability of the very specialized personnel required by the Agency in all types of emergency situations. The need for such legislation has been recognized by the Congress, which has directed that it be submitted for Congressional consideration not later than January 1, 1960.

The Federal Aviation Agency is conducting a vigorous research and development program and, based on this research and development program, is completely modernizing the Federal Airways system and its traffic capacity. In the period before programmed improvements can be completed and particularly in the period before the benefits of the newer computers and integration with the Air Force's SAGE program can be realized, defense needs in an emergency can be met only through the use of extreme measures. For example, a general war emergency at this time would place such loads on the traffic control system that almost all civil flying and non-tactical military flying would have to be stopped immediately upon the onset of such an emergency with reintroduction of civil flying on an "airspace available" basis.

Notwithstanding the major importance of civil air transportation to the overall mobilization effort, if a serious national emergency should occur now the Nation's air traffic control capacity would have to be reserved largely for urgent military needs. In a period of mobilization before expected general war, in a limited war, or in any other situation in which military air combat actions will not actually occur in great volume, civil aviation could continue in concert with greatly increased military support flying and tactical aircraft repositioning; however, such a situation could be handled within the current air traffic control capability only by departing from desirable separation criteria and through the use of priorities that are neither normal to the system nor productive of the greatest overall efficiency.

The FAA modernization program is designed specifically to remove such deficiencies, as well as to keep pace with the rapid growth of civil aviation. This program provides, in effect, for the automation of the entire air traffic control system. Its major features include enroute traffic control centers collocated and functionally integrated for purposes of economy, efficiency, and invulnerability with the Air Force's SAGE system. The second major element in the modernized air traffic control system is the transition-terminal traffic control facility,

which is a radar-supported, highly sophisticated facility handling the great volumes of air traffic surrounding major hubs. A typical intercity flight will involve, first, a controlled departure handled by the transition-terminal facility servicing the area in which the flight originates; second, control by an enroute traffic control facility for the middle portion of the flight; and finally, a controlled approach at the destination handled by the transition-terminal facility serving that area.

It is the goal of the FAA to provide eventually for total control of all aircraft at the higher altitudes. The speeds of aircraft operating at the higher altitudes are such that, with a growing volume of such traffic, the long-used rule of "see and be seen" will not provide an acceptable degree of safety. At lower altitudes the transition-terminal facilities will provide very much greater traffic capacity in all weather conditions. In addition, transition-terminal facilities will handle the clear air situation on a much more systematic basis and provide a much greater amount of radar advisory information to pilots flying under visual rules.

The Federal Aviation Agency has under way an extensive program for reducing the vulnerability of the air traffic control system to damage in the event of a nuclear attack and for insuring, insofar as possible, the continued availability of effective air traffic control under any condition of national emergency. The new transition-terminal control facilities, which in the current state of the system's development will also serve for a period of time as enroute centers, are being dispersed outside areas of probable blast damage and are being given radiological defense protection. This program is under way, not merely planned. The enroute traffic control centers that are being collocated with SAGE will have the same protective construction as the SAGE centers at the same locations. Therefore, most of our air route traffic control centers will receive protection effective against almost any strikes, other than direct hits.

As these basic improvements in the wartime capability of the air traffic control system are realized, the Agency must take appropriate action to ensure the adequacy of its communications capability under various degrees of emergency; to stockpile and pre-position supplies, equipments, and other items required for use under emergency operating conditions; to provide radiological protection in existing buildings used for essential wartime operations; and to reduce the vulnerability of air traffic control, aeronautical communications, and air navigation aids to disruption through any type of enemy action, whether overt or covert.

Although many of the Agency's emergency readiness preparations are undertaken with specific military support responsibilities in mind, their application to the civil aviation aspects of mobilization and defense are not overlooked. Indeed, under any condition of mobilization, civil air transportation would be a critical element in the Nation's war effort. Should a direct nuclear attack on the United States ever materialize, air transport would play a decisive role

in civil survival operations. Air transportation systems would be much less severely disrupted by the physical and radiological effects of a nuclear attack than would surface transport systems. In an immediate post-attack period (when the radiological hazard would be greatest and most widespread), it would be of the utmost importance to maintain maximum effectiveness in facilitating the flow of civil air traffic required for relief and rescue missions. The expeditious and timely movement of subsistence items and basic supplies could, in fact, determine whether large numbers of our people would survive an attack.

In this connection, it should be specifically noted that the preparations made by the Federal Aviation Agency for direct military support in the event of a national emergency will also enable it to discharge its responsibilities for the support of essential civil air movements. The Agency's objective is to develop a compatible environment in which all aircraft, regardless of mission, can be safely and efficiently accommodated.